

A fresh look at oncology facts on south central Asia and SAARC countries

WHO divides the world into several regions.^[1] One of them is South Central Asia. This consists of 14 countries – Islamic republic of Iran, 5 that were born from the former USSR (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan), and remaining 8 that are together called the SAARC countries (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka). The population of South Central Asia and SAARC Countries forms 26.68 % and 24.59 % of the world population, respectively [Table 1].^[2-4] As far as cancer in these regions is concerned, incidence of new cases is 11.24% and 10.23 % of the world's cases. Yet, the burden of cancer deaths as compared to the incidence is 68.85 % and 68.44 %, respectively. This compares poorly to the 59.74% for the world. This well-known fact reaffirms that these regions of the world need to improve their cancer management strategies.

Facts about cancer in South Central Asia are shown in Table 2. For the entire population, the 5 most common cancers are cancer of cervix and uterus, breast cancer, lung cancer, oral cancer and Cancer of esophagus.^[2,3] Interestingly, the 5-year prevalence of cancers is significantly higher in females.

The Southern countries of Asia (India, Pakistan, Nepal, Bangladesh, Bhutan, Sri Lanka, Afghanistan, Maldives, Burma, and Tibet) share more than just a common love of chai, cricket, and Bollywood. We also share a matching oncologic profile, albeit with some regional differences. With respect to figures for South Central Asia, the SAARC countries contribute a burden of 91.10 % of incidence, 90.93% 5-year prevalence and 90.56% of cancer deaths [Tables 1, 3]. Hence, importance of focusing on oncology in SAARC countries cannot be over-emphasized.

As an overview, in males, lung and oral cancer rank as the top 2 prevalent cancers while in women, breast, and cervical cancer take the top 2 spots.^[5] Let us now take the

SAARC nations of India, Pakistan, Bangladesh, Bhutan, Nepal, and Sri Lanka that are coming together for this manuscript. For instance, the level of oncologic care varies widely across our countries as well as within each country. The number of trained oncologists varies from a high of 1500 in India to a low of 2 in Bhutan [Table 4].

We will also consider the 6 countries individually in terms of cancer burden and the level of oncologic expertise available.

Starting with India, there are 27 dedicated cancer hospitals and an additional 300 general or multispecialty hospitals that provide care to cancer patients. There are about 1 million patients diagnosed with cancer each year with the majority being diagnosed in an advanced stage, leading to a significant number of deaths. Cancer is the 4th leading cause of death in India in the 25 to 69 year age group, ranking behind cardiovascular disease, respiratory disease, and tuberculosis. There are 1500 trained oncologists who take care of these patients, compared to a total number of over 4.4 lakh doctors of all specialties. India has an official national cancer control program, that mainly focuses on primary, secondary and tertiary cancer prevention strategies, a national cancer registry program, 5 oncology societies, 300 radiotherapy machines, produces 5 cancer journals and organizes at least 55 oncology-centric conferences annually. Although this may seem like a situation of plenty, in actuality, this is not the case. There are over 1 billion people in India, of which there are about 24 lakh persons with cancer at any given point of time according to the WHO report. Thus, the ratio of cancer patients to oncologists in India is 1600 to 1. Compare this to the results of a study commissioned by ASCO in 2008 that predicted that by the year 2020, there will be 12,500 oncologists in America available to care for the nearly 1.4 million Americans diagnosed with cancer each year, leading to a ratio of about 100 patients to 1 oncologist.^[5,6] The same ASCO report actually raised concerns over the growing shortage in the oncologist workforce, in spite of this seemingly enviable ratio! Their analysis projected an increase of 14% in oncology training seats, whereas the demand for patients requiring oncology visits was expected to increase by 48%. This was mainly due to the growth and aging of the population as well as the increase in the number of cancer survivors. Yet, only 30% expected that the government shall fund new positions

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to increase training capacity, and in fact as many as 24% did not know where such funding might be forthcoming. As a result, the training program directors at oncology centers in USA were of the opinion that there will not be a significant increase in the number of oncology training positions during the next 5 years. In the light of the current limitations (financial, administrative, and others) in India (and other SAARC countries), we can expect that our preparedness for the future, at best, is woefully inadequate.

The oncology situation in the other SAARC countries is roughly comparable to that in India in terms of cancer patients to doctors. However, due to the smaller population and smaller actual numbers of oncologists, all types and level of oncology specialists may not be available. For example, there are 2 qualified oncologists in Bhutan, both of whom are surgeons. Thus, there is no trained medical oncologist in Bhutan, and no radiotherapy machines in a country with a population of 7.25 lakhs. Bhutan had 639

Table 1: Comparison of population, cancer incidence, cancer deaths, and cancer prevalence rates in different regions

	Population	New cancer cases / year	Cancer deaths / year	5 year cancer prevalence (adults)	Cancer prevalence as proportion per 100,000 population
World	6,750,062,000	12,662,554	7,564,802	28,803,200	585.8
South Central Asia	1,728,752,000	1,423,200	979,900	2,682,400	228.7
SAARC countries	1,659,700,000	1,296,558	887,355	2,439,285	
India	1,247,300,000	948,858	633,455	1,705,085	211.4
Pakistan	176,900,000	139,200	101,600	304,000	274.0
Bangladesh	150,700,000	141,100	103,300	291,200	267.8
Afghanistan	32,400,000	14,400	11,400	27,500	188.3
Nepal	30,500,000	27,800	20,000	56,100	310.3
Sri Lanka	20,900,000	24,400	17,000	53,700	353.3
Bhutan	700,000	600	500	1,100	243.1
Maldives	300,000	200	100	600	260.9

Table 2: Cancer facts in south central Asia

South-central Asia	Male	Female	Both sexes
Population (thousands)	888237	840515	1728752
Number of new cancer cases (thousands)	651.2	772.0	1423.2
Age-standardised rate (W)	99.8	110.8	104.6
Risk of getting cancer before age 75 (%)	10.9	11.4	11.1
Number of cancer deaths (thousands)	496.8	483.1	979.9
Age-standardised rate (W)	78.0	71.7	74.4
Risk of dying from cancer before age 75 (%)	8.7	7.8	8.2
5-year prevalent cases, adult population (thousands)	993.8	1688.6	2682.4
Proportion (per 100,000)	165.6	294.8	228.7
5 most frequent cancers (ranking defined by total number of cases)	Lung	Cervix uteri	Cervix uteri
	Lip, oral cavity	Breast	Breast
	Other pharynx	Ovary	Lung
	Oesophagus	Lip, oral cavity	Lip, oral cavity
	Stomach	Oesophagus	Oesophagus

Table 3: Incidence and deaths of cancer in SAARC countries

	SAARC Countries	India	Pakistan	Bangladesh	Nepal	Sri Lanka	Bhutan
New cancer cases / year	1,296,558	948,858	139,200	141,100	27,800	24,400	600
% among SAARC		73.18 %	10.73 %	10.88 %	2.14 %	1.88 %	0.05 %
Cancer deaths / year	887,355	633,455	101,600	103,300	20,000	17,000	500
% among SAARC		71.39 %	11.45 %	11.64 %	2.25 %	1.92 %	0.06 %
Death as % of incidence within country		66.76 %	72.99 %	73.21 %	71.94 %	69.67 %	80 %

Table 4: Insight into oncology status of SAARC Countries

Question	Bhutan	Pakistan	India	Bangladesh	Sri Lanka	Nepal
Number of qualified oncologists in the country	2	125	1500	150	18	40
Number of cancer centers in the country	1	20	27	18	06	5
Number of other hospitals treating cancer patients in the country	1	50	300	30	04	5
Number of new cancer patients diagnosed every year in the country	300	150,000	1,000,000	100,000	15,000	30,000
Number of medical oncology journals brought out by the country	Nil	0	5	3	None	None
Number of oncology conferences and CMEs conducted in the country every year	Only once in 2011	6	55	20	05	30
Number of radiotherapy machines currently available in working condition in the country	Nil	25	300	19	11	6
Number of scientific societies/ associations dedicated to oncology in the country	Nil now, going to set up soon	2	5	3	01	10
Is there degree training in oncology (any branch) available in the country	No	Yes	Yes	Yes	Yes	Yes
Is there an official national healthcare policy for cancer in the country (of any nature)	Yes	No	Yes	No	Yes	Yes

cancer patients registered in the year 2010. If requiring oncologic surgeries, especially gynecologic oncological surgeries, patients are able to benefit from treatment within Bhutan. However, the majority, needing radiotherapy or chemotherapy currently, have to make their way to India for management. Recently, the Jigme Dorji Wangchuck National Referral Hospital (JDWRH) established a chemotherapy unit, taking into account the increasing number of cancer patients noted in the country (albeit at the expense of abandoning plans for a new burns unit). Ongoing initiatives to prevent cancer include pap smear program and HPV vaccination for the whole country, hepatitis B vaccination for all newborns and a nationwide ban on sale of tobacco – truly commendable activities.

Pakistan, with its population of over 173 million people, is the 6th most populous country in the world. There are over 1.4 million cancer patients in Pakistan, and approximately 150,000 new cancer patients are added each year. There are 20 cancer hospitals and 50 other hospitals where cancer patients can be cared for. There are 125 trained oncologists, 25 radiotherapy machines, 6 oncology-centric conferences, and provision for specialized oncology training in Pakistan. Pakistan recently established the Karachi Cancer Registry and the Pakistan Cancer Control Program 2.^[7] However, Pakistan has yet to publish an oncology journal.

Bangladesh, at 142 million people, is the 9th most populous country in the world. There are 13 to 15 lakh cancer patients in Bangladesh, with about 2 lakh patients newly-diagnosed with cancer each year. In order to care for these patients, there are 150 qualified oncologists, 18 cancer hospitals and an additional 50 general hospitals that accept and provide care to cancer patients. Bangladesh publishes

3 oncology journals, organizes 20 oncology conferences annually, has 3 oncology societies, an oncology training program, and several hospital-based and population-based cancer registries. Therefore, oncology specialty is relatively well-established in Bangladesh, but there is no national cancer program yet.

Nepal, with its population of almost 30 million, has about 30,000 new cancer patients each year. These patients can receive oncologic care from 40 trained oncologists in 5 cancer centers. There is provision for radiotherapy, postgraduate oncology training programs, and a national cancer policy. Nepal also does not publish an oncology journal.

Sri Lanka, with a population of 20 million, also has a well-established oncologic program. There are approximately 15,000 new patients diagnosed with cancer in Sri Lanka annually. There are 6 cancer hospitals and 18 qualified oncologists. Radiation therapy is relatively easily available with 11 radiation therapy machines in the country, including a recently commissioned linear accelerator at the National Cancer Center, Maharagama, Colombo.

There is a 3rd issue that remains an important factor in this region. So far, we have discussed global figures (Globocan, IARC, WHO, etc) and opinions of experts in the SAARC countries [Table 4]. What about data from local registries that show that Globocan data is underestimating cancer incidence in our countries? Let us take the example of breast cancer in India. The Indian Council of Medical Research population-based cancer registry of New Delhi shows the incidence to be 29.3 per 100,000 of the population in 1994-95.^[8,9] And, the Indian

Cancer Society's Maharashtra population-based registry shows it to be 26.8 per 100,000 of the population in 2001.^[9,10] Both these figures are higher than the < 19.5 incidence per 100,000 population showed in Globocan 2002 data.^[11]

Thus, the infrastructure and human resources for oncologic care in South Asia is steadily improving. However, we have a long way to go. By providing a forum to share clinical observations, educational material, research findings, and news of conferences and meetings, we hope that the SAJC will provide an impetus to accelerate advances in cancer care for South Asia and ultimately help us provide the best care possible to the quarter of the world's population that has made this region their home.

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News

A road map to tackle the global challenge of antimicrobial resistance

The Clinical Infectious Diseases Society is organizing a joint meeting "A road map to tackle the global challenge of antimicrobial resistance" on 24th August 2012 at Chennai from 9 am to 6 pm - with the participation of other medical professional societies in India.

Their aim is to formulate a road map to tackle the Indian perspective of the global antimicrobial resistance problem. As responsible medical societies/ bodies, it is our responsibility to help our Governments in tackling this serious menace, by bringing out a guidelines document. We have also invited international experts (Herman Goossens, Dilip Nathwani, Stephan Harbarth, Arjun Sreenivas, David Paterson, and Paul Thambyah) to discuss about the same as well as plan of action in various continents.

We urge you to actively participate in this meeting and represent the voice of the oncology community.

For registration and further details, please contact Dr. Abdul Ghafur (drghafur@hotmail.com).